UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,069	02/05/2002	David W. McDaniel	062891.0673	1183

7590   07/26/2005

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EXAMINER
PATEL, ASHOKKUMAR B

ART UNIT	PAPER NUMBER
2154	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/072,069	MCDANIEL, DAVID W.
	Examiner	Art Unit	
	Ashok B. Patel	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>31 May, 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-27</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-27</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ .

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

1.   Claims 1-27 are subject to examination.

Response to Arguments

2.   Applicant's arguments filed May 31, 2005 have been fully considered but they are

not persuasive for the following reasons:

3.   **Amended Claims 1-27 :**

Applicant's argument:

"In other words, the cited references, alone or in combination, fail to teach or

suggest modifying addresses for packets of a communication between user interface

devices, wherein the address modification process is performed independently from

both of the user interface devices. In contrast, the cited references disclose address

modification performed by at least one of the user interface devices involved in the

communication."

Examiner's response:

Sheymov teaches at page 7, line 16-18, "A management system 18 periodically

changes the address for the computer 14 by providing a new address from a cyber

address book 20 which stores a plurality of cyber addresses. Each new cyber address

is provided by the management system 18 to the router 16 and to a user computer

address book 22."

Thus Sheymov is clear about where the address modification taking place, and as such

it elucidates "the address modification process is performed independently from both of

the user interface devices."

Applicant's argument:

"The client computer 801 then uses the block of P addresses and address-change algorithms to communicate securely with the router 811. Thus, the client computer 801 is integrally involved in providing the address-hopping functionality. Therefore, like Sheymov, Munger cannot provide the advantages of the independently-provided address modification recited in amended Claim 1, which advantages are discussed below."

Examiner's response:

Munger teaches at page 8, para.[109], "Each communicating pair of nodes in a chain participating in any session stores two blocks of IP addresses, called netblocks, and an algorithm and randomization seed for selecting, from each netblock, the next pair of source/destination IP addresses that will be used to transmit the next message. In other words, the algorithm governs the sequential selection of IP-address pairs, one sender and one receiver IP address, from each netblock. The combination of algorithm, seed, and netblock (IP address block) will be called a "hopblock." A router issues separate transmit and receive hopblocks to its clients."

Thus Munger teaches that "the address change is performed independently from both the first user interface device and the second user interface device.

Applicant's argument:

"Third, Challener does not teach or suggest address modification at all, much less address modification performed independently from the user interface devices involved in a communication."

Examiner's response:

As previous office action states "Challener teaches an IP based voice communication

system transferring packets over the Internet (Paragraph 0008)."

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another riled in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351 (a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1-3, 5, 7, 14, 15, 18, 20, 21, 24, and 26 are rejected under 35 U.S.C.

102(b) as being anticipated by Sheymov et al. (PCT Application WO 0070458 published

1112312000, hereinafter Sheymov).

6.   As per claim 1, Sheymov discloses a method for securing packet-based

communications comprising (page 3, lines 1-3: securing network communications: page

7, lines 22-24: packet based): receiving at a first translation module a stream comprising

a plurality of packets regarding a communication from a first user interface device

intended for a second user interface device, each packet having an original destination

address and an original source address; and for each of the packets, performing an

address modification process including (page 7, lines 20-24: packet has original

destination address; page 16, lines 1-5: packets have source address), changing the

original destination address to a selected one of a plurality of modified destination addresses assigned to a second translation module remote from the first translation module, (Fig. 1, page 7, lines 15-18: changing destination address), wherein each of the selected modified destination addresses is resolvable by the second translation module to the original destination address for forwarding the packet to the second interface device; (page 7, lines 25-28).

Wherein the address modification process is performed independently from both the first user interface device and the second interface device. (page 7, line 16-18)

7.   As per claim 2, Sheymov discloses the method of claim 1, wherein, except for a first one of the packets, each of the packets is changed to a different one of the modified destination addresses than a preceding one of the packets (page 9, lines 2023).

8.   As per claim 3, Sheymov discloses the method of claim 3, wherein, wherein no more than ten consecutive packets in the stream are changed to an identical one of the modified destination addresses (page 9, lines 20-23: frequency is selectable and can be increased up to the point where every packet consecutive packet has a different address).

9.   As per claim 5, Sheymov discloses the method of claim 1, further comprising randomly selecting the modified destination address for the packet from a range of available destination addresses for the second translation module (page 4, lines 18-20: address selected from table of addresses; page 4, lines 13-15: random address changes).

10. As per claim 7, Sheymov discloses the method of claim 1, wherein the original destination address comprises an internet protocol address and a port, and the modified destination address for the packet comprises a modified internet protocol address and a modified port (page 8, lines 21-26).

11. As per claims 14, 15, and 18, claims 14, 15, and 18 are rejected for the same reasons as claims 1, 2, and 7 respectively.

12. As per claims 20, 21, and 24, claims 20, 21, and 24 are rejected for the same reasons as claims 1, 2, and 7 respectively.

13. As per claim 26, claim 26 is rejected for the same reasons as claim 1.

14. Claims 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Munger et al. (US Published Application 200410003116, hereinafter Munger).

15. As per claim 10, Munger discloses a method for securing packet-based communications comprising: negotiating translation parameters with a remote device for a communication stream between a first user interface and a second user interface device, the translation parameters comprising an original destination address, a plurality of available destination addresses, and an algorithm (Paragraph 0112; send SSYN packet first including destination address, response includes parameters for synchronizing algorithm to translate addresses; Paragraph 0117 exchanging algorithm between session participants); determining a modified destination address from among the available destination addresses according to the algorithm (Paragraphs 0108-0109); receiving a packet of the communication stream having the modified destination address (Paragraph 0110); and changing the packet to have the original destination

address , wherein the address change is performed independently from both the first user interface device and the second user interface device.(Paragraph 0011 and 0109).

16.   As per claim 11, Munger discloses the method of claim 10, wherein: the translation parameters further comprise an original source address and a plurality of available source addresses; and further comprising: determining a modified source address from among the available source addresses according to the algorithm (Paragraphs 0023 and 0108-0109).

17.   As per claim 12, Munger discloses the method of claim the method of claim 11, the packet further having the modified source address, the method further comprising changing the packet to have the original source address (Paragraph 0011).

18.   As per claim 13, Munger discloses the method of claim 10, wherein the algorithm comprises a hopping pattern that dictates how to select from among the available destination addresses (Paragraph 0023).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

20.   Claims 4, 6, 9, 16, 17, 19, 22, 23, 25, and 27 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Sheymov et al. (PCT Application WO 0070458 published 11

/23/2000, hereinafter Sheymov) in view of Munger et al. (US Published Application

2004/0003116, hereinafter Munger).

21.   As per claim 4, Sheymov teaches the method substantially as described in claim

1, but does not explicitly teach for each of the packets, changing the original source

address to a selected one of a plurality of modified source addresses, wherein each of

the selected modified source addresses is resolvable by the remote device to the

original source address.

22.   Munger teaches changing the original source address to a selected one of a

plurality of modified source addresses, wherein each of the selected modified source

addresses is resolvable by the remote device to the original source address

(Paragraphs 0023 and 0108).

23.   It would have been obvious to one of ordinary skill in this art at the time the

invention was made to combine the teaching of Sheymov and Munger because they

both with providing network security by varying IP addresses of packets. Furthermore,

the teaching of Munger to modify the method taught by Sheymov to change the source

address as well as the destination address would increase security of the traffic in the

network by disguising both directions of traffic between nodes (See Munger,

Paragraphs 0020 and 0021).

24.   As per claim 6, Sheymov teaches the method substantially as described in claim

1, but fails to teach the method further comprising selecting the modified destination

address for the packet from a range of available destination addresses for the remote

device based on a hopping pattern.

25. Munger teaches selecting the modified destination address for the packet from a

range of available destination addresses for the remote device based on a hopping

pattern (Paragraph 0023).

26.   It would have been obvious to one of ordinary skill in this art at the time the

invention was made to combine the teaching of Sheymov and Munger because they

both with providing network security by varying IP addresses of packets. Furthermore,

the teaching of Munger to modify the method taught by Sheymov to select the modified

destination address for the packet from a range of available destination addresses for

the remote device based on a hopping pattern would provide increased security for

communications of packets by changing routes making it difficult for an interloper to

intercept the multiple packets of a message (See Munger, Paragraph 0050).

27.   As per claim 9, Sheymov teaches the method substantially as described in claim,

but fails to explicitly teach detecting initiation of the stream; identifying the remote

device based upon the original destination address; and negotiating translation

parameters for the stream with the remote device, the translation parameters

comprising an algorithm dictating how to select from among the modified destination

addresses.

28.   Munger teaches a method for establishing secure packet communications

including detecting the initiation of the stream, identifying the remote device based upon

the original destination address; and negotiating translation parameters for the stream

of with the remote device, the translation parameters comprising an algorithm dictating how to select from among the modified destination addresses. (Paragraph 0112; send SSYN packet first including destination address, response includes parameters for synchronizing algorithm to translate addresses).

29.   It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Sheymov and Munger because they both with providing network security by varying IP addresses of packets. Furthermore, the teaching of Munger to modify the method taught by Sheymov to detect an initial packet, identify the destination and negotiate address translation because that would increase the difficulty for an interloper to predict the sequence of destination address thus providing increased security for communications of packets by changing routes making it difficult for an interloper to intercept the multiple packets of a message (See Munger, Paragraph 0050).

30.   As per claims 16, and 17, claims 16 and 17 are rejected for the same reasons as claims 4 and 6 respectively.

31.   As per claims 19 and 25, claims 19 and 25 are rejected for the same reasons as claim 9 above.

32.   As per claims 22 and 23, claims 22 and 23 are rejected for the same reasons as claims 4 and 6 respectively.

33.   As per claim 27, Sheymov teaches a method for securing packet-based communications consisting of a stream of packets all of the packets from a first user interface device intended for a second user interface device, each packet having an

original destination address and an original source address (page 7, lines 20-24: packet

has original destination address; page 16, lines 1-5: packets have source address)

comprising: performing an address modification process including selecting one of the

modified destination addresses from among a plurality of modified destination

addresses according to an algorithm (page 9, lines 20-23: changing coordinates by

previous arrangement; Claim 5: pseudo random generator plus seed used to select

modified destination address) and changing the original destination address to the

selected modified destination address (Fig. 1, item 14: remote device; page 7, lines 15-

18: changing destination address), wherein each of the selected

modified destination addresses is resolvable by the second translation module to the

original destination address (page 7, lines 25-28) wherein, except for a first one of the

packets, each of the packets is changed to a different one of the modified destination

addresses than a preceding one of the packets (page 9, lines 20-23), and wherein the

address modification process is performed independently from both the first user

interface device and the second interface device. (page 7, line 16-18)

34.   Sheymov fails to explicitly teach detecting the initiation of the communication

stream at a first translation module; identifying a second translation module remote

from the first translation module based upon the original destination address; and

negotiating translation parameters for the communication stream with the second

translation module, the translation parameters comprising an algorithm dictating how to

select from among a plurality of modified destination addresses;"

35.   Munger teaches a method for establishing secure packet communications

including detecting the initiation of the stream, identifying the remote device based upon

the original destination address; and negotiating translation parameters for the stream

of with the remote device, the translation parameters comprising an algorithm dictating

how to select from among the modified destination addresses (Paragraph 0112; send

SSYN packet first including destination address, response includes parameters for

synchronizing algorithm to translate addresses).

36.   It would have been obvious to one of ordinary skill in this art at the time the

invention was made to combine the teaching of Sheymov and Munger because they

both with providing network security by varying IP addresses of packets. Furthermore,

the teaching of Munger to modify the method taught by Sheymov to detect an initial

packet, identify the destination and negotiate address translation because that would

increase the difficulty for an interloper to predict the sequence of destination address

thus providing increased security for communications of packets by changing routes

making it difficult for an interloper to intercept the multiple packets of a message (See

Munger, Paragraph 0050).

37.   Claim 8 is rejected under 35 U.S.C. 103(x) as being unpatentable over Sheymov

et al. (PCT Application WO 0070458 published 1112312000, hereinafter Sheymov) in

view of Challener et al. (US Published Application 200210091941, hereinafter

Challener).

38.   As per claim 8, Sheymov does not explicitly teach the method of claim 1, wherein

the stream comprises an internet protocol based voice communication session.

Sheymov does describe the use of Internet protocol based communication systems (page 3, lines 10-11; page 4, lines 5-6).

39. Challener teaches an IP based voice communication system transferring packets over the Internet (Paragraph 0008).

40. It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Sheymov and Challener because they both with providing secure communications over an IP network. Furthermore, the teaching of Challener to modify the system taught by Sheymov to accommodate internet based voice communication sessions would provide a very economical method of supplying voice communications between stations (See Challener Paragraph 0003) while providing security against interception of the communication session (See Sheymov, page 3, lines 16-20).

Conclusion

Examiner's note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (571) 272-3972. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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Business Center (EBC) at 866-217-9197 (toll-free).

Abp
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